

AMSAT News Service Weekly Bulletins

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The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, the Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on <http://www.amsat.org> publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to: ans-editor [at] amsat [dot] org.

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see: <https://mailman.amsat.org/postorius/lists/ans.amsat.org/>

ANS-196 AMSAT News Service Weekly Bulletins

To: All RADIO AMATEURS

From: Radio Amateur Satellite Corporation

712 H Street NE, Suite 1653

Washington, DC 20002

DATE 2024 JUL 14

2024 AMSAT Board of Directors Election

The nomination period for the 2024 AMSAT Board of Directors Election ended on June 15th. The following candidates have been duly nominated:

- * Mark Hammond, N8MH
- * Frank Karnauskas, N1UW
- * Bruce Paige, KK5D0
- * Paul Stoetzer, N8HM
- * Douglas Tabor, N6UA

As three seats on the Board of Directors are up for election this year, the three candidates receiving the largest number of votes shall be declared elected to the seats. The two candidates receiving the next largest number of votes shall be declared First Alternate and Second Alternate, respectively.

The voting process will be conducted via AMSAT's Wild Apricot membership system and will commence on July 15th. Instructions for voting will be emailed to all members in good standing as of July 1st by July 15th.

The voting period shall conclude on September 15th and results will be announced not later than September 30th.

[ANS thanks Jeff Davis, KE9V, AMSAT Secretary for the above information.]

Field Day Submissions Now Due

Field Day is behind us and it is time to tally your contacts and submit the for AMSAT Field Day.

The Satellite Summary Sheet should be used for submission of the AMSAT Field Day competition and be received by Bruce Paige, KK5D0 (e-mail) by 11:59 P.M. CDT, Monday, July 23, 2024. This year, Bruce is using the same due date as the ARRL. The only method for submitting your log is via e-mail to [kk5do\(a\)amsat.org](mailto:kk5do(a)amsat.org)<[mailto:kk5do\(a\)amsat.org](mailto:kk5do(a)amsat.org)> or [kk5do\(a\)arrl.net](mailto:kk5do(a)arrl.net)<[mailto:kk5do\(a\)arrl.net](mailto:kk5do(a)arrl.net)>. Bruce reports that he has not had a mail-in entry in a very long time.

If you need to download a summary sheet, it can be found at <https://www.amsat.org/field-day/> or directly from his website <https://www.amsatnet.com/2024fd.docx>.

[ANS thanks Bruce Paige, KK5D0, AMSAT Director Contests and Awards, for the above information]

The 2024 AMSAT President's Club coins are here now!
Help Support GOLF and Fox Plus
[cid:image001.jpg(a)01DAD546.1F6C9E10]

Join the AMSAT President's Club today and help
Keep Amateur Radio in Space!

<https://www.amsat.org/join-the-amsat-presidents-club/>

Grace Papay, K8LG Named 2024 WA6ITF Memorial Amateur Radio Newsline Young Ham of the Year

Grace Papay, K8LG, of Holland, Michigan, has been selected as the 2024 Bill Pasternak WA6ITF Memorial Amateur Radio Newsline Young Ham of the Year. Grace, 18, is the daughter of Doug Papay, K8DP, and Carrie Papay K8CLP.

Grace earned her Technician license in March 2021 and within a year achieved her Extra Class license, passing the test in March 2022.

She is a recent honors graduate of Holland Christian High School in her hometown, where she earned a varsity letter in the Unified Sports program.

Grace credited her father and her grandfather, John Papay, K8YSE, a well-known operator in the ham radio satellite community, for drawing her into the hobby.

"I got involved in amateur radio satellites," Grace recalls. "I got on the air. And now it has turned into something from honoring my grandfather to a hobby I'm on every day and I love." With support from her grandfather and father, she earned the DX Century Club certificate for contacts exclusively using satellites.

Grace attended Youth on the Air camps in Cincinnati in 2022 and Ottawa in 2023, where she says she was exposed to a variety of other amateur radio activities including balloon launches, slow-scan television and radio contesting.

She was part of the K3LR IOTA Dave Kalter Memorial Youth DX Adventure in 2023 and was a team member for the J62K St. Lucia DX contest operation in 2024. Grace is active on the HF bands and operates in the ARRL and CQ DX SSB and CW contests, ARRL Sweepstakes and CQ WPX, as well as Youth on the Air events.

For the past few years, Grace has been a regular presenter at the Youth Forum at Dayton Hamvention. She delivered a presentation on youth in contesting at the Contest University Forum at Dayton this year and assisted at the YOTA and AMSAT booths.

She is an active member of the Holland Amateur Radio Club, Grand Rapids Amateur Radio Association, West Chester Amateur Radio Association and the American Radio Relay League.

Grace received the Radio Club of America's Young Achievers Award in 2023. She had an article on the "Next Generation of Contesters" published in the National Contest Journal (Nov/Dec 2023). A story she co-wrote on YOTA Camp 2022 appeared in the August 2022 edition of CQ magazine.

Grace will be attending Cedarville University in Cedarville, Ohio this fall, where she will study electrical engineering. She says amateur radio played a major role in her choice of a major.

The YHOTY award will be presented to Grace during a ceremony at the Huntsville Hamfest on Saturday, Aug. 17, 2024 at the Von Braun Center in Huntsville, Alabama. Amateur Radio Newsline and Yaesu USA are primary sponsors of the award, along with Heil Sound Ltd. and Radiowavz Antenna Company.

The Young Ham of the Year Award was inaugurated by William Pasternak, WA6ITF, in 1986. Upon his passing in 2015, Bill's name was added to the award as a memorial to his commitment to recognizing the accomplishments of young people to the Amateur Radio Service.

[ANS thanks Amateur Radio Newsline for the above information.]

AMSAT TLE Dissemination Updates

AMSAT with help from its partner New England Sci-Tech prepares a bulletin of orbital elements during the first hour of the UTC day, and posts it to <https://www.amsat.org/tle/daily-bulletin.txt> as well as "bare" elements without the bulletin header and footer at <https://www.amsat.org/tle/dailytile.txt>. Other files and URLs with "nasa" and "ftp" in the URL are still maintained to support older software, but suggest organizations protocols that are no longer involved in TLE dissemination. Use of older filenames and URLs is deprecated and AMSAT does not promise to maintain them in perpetuity.

End users and software developers are encouraged to use the URLs above going forward. The files are available via HTTPS (preferred) as well as unencrypted HTTP for legacy software.

[ANS thanks Joe Fitzgerald, KM1P, AMSAT Orbital Elements Manager/IT Team for the above information.]

Need new satellite antennas?

Purchase M2 LEO-Packs from the AMSAT Store.

[cid:image002.png(a)01DAD546.1F6C9E10]

When you purchase through AMSAT, a portion of the proceeds goes towards Keeping Amateur Radio in Space.

<https://amsat.org/product-category/hardware/>

Updating Keps in SatPC32 - An Update from DK1TB

Erich Eichmann, DK1TB, SatPC32 author offers this update:

"The SatPC32 Update Keps feature doesn't work with https links for TLE files. That would require changes of the source code and maybe requires a new Delphi version for me. I will care about that but that will at least take time and at present I don't have much time for the hobby.

"But all https websites can be accessed also with http. They are not "secure" sites but that is meaningless with websites that contain Keps. Therefore use http in the aux. file Celestrak.SQF for AMSAT and Celestrak TLE (Two Line Elements) files, as described by Charlie, AJ9N, see below. With that modification the Download Keps function works.

"Also, the https links can be accessed with your browser, of course. Enter the links into the address line of the browser. So, you can download the Keps and save them in the SatPC32 data folder 'Kepler' (see path to that folder in the footline of menu 'Satellites').

"By the way - Meanwhile my website supports also SSL. You can access it with <https://www.dk1tb.de> and <https://www.dk1tb-2.de>.

"Also, SatPC32 supports now, besides TLE files, the new formats for Keps files XML, KVN and CSV. Celestrak publishes the Keps files also in these formats. The SatPC32 UpdateKeps feature works with these files also when downloaded from https sites (I don't know why that is different versus the TLE files). Therefore you can use https in Celestrak SQF with these files such as <https://celestrak.org/NORAD/elements/gp.php?GROUP=amateur&FORMAT=xml>."

[ANS thanks Erich Eichmann for the above information.]

NASA Discovers Strange Spectral Formations Cover LEO Orbits

NASA scientists have spotted unusual shapes in the Earth's ionosphere, hundreds of miles above the Earth's surface.

[cid:image003.jpg(a)01DAD546.1F6C9E10]

The ionosphere stretches from 50 to 400 miles above the planet and marks the boundary between our planet's atmosphere and outer space. While it houses most satellites orbiting the Earth, it's vulnerable to changes in space weather – electromagnetic radiation emitted by the Sun – that can wreak havoc in the zone and mess with communications equipment.

Under some conditions, the layer can become electrically charged. As detected by the Global-scale Observations of the Limb and Disk (GOLD) imaging instrument, plasma bands stretching across the ionosphere can result in formations of unusual X and C shapes.

It's a baffling "alphabet soup," as NASA termed the findings in a news release, that could shed light on how space weather can influence our planet's upper atmosphere and "interfere with radio and GPS signals."

Charged particles can create dense bands or "crests" around the Earth's magnetic equator, while low density pockets caused by the setting Sun can result in "low-density pockets" called 'bubbles,' according to NASA.

Scientists believe that larger disturbances such as solar storms or even massive volcanic eruptions can cause multiple crests to merge and form an "X" shape, as previous GOLD observations have shown.

But now, scientists have spotted these same shapes without any such occasion, during what scientists call "quiet time."

"Earlier reports of merging were only during geomagnetically disturbed conditions – it is an unexpected feature during geomagnetic quiet conditions," said University of Colorado research associate Fazlul Laskar, who lead-authored a paper on the discovery earlier this year, in a NASA statement.

Scientists are now wondering if something else could be causing these X shapes to appear.

"The X is odd because it implies that there are far more localized driving factors," said NASA scientist and ionosphere expert Jeffrey Klenzing. "This is expected during the extreme events, but seeing it during 'quiet time' suggests that the lower atmosphere activity is significantly driving the ionospheric structure."

Apart from X shapes, some bubbles in the ionosphere can also curve into C shapes, which new observations show can appear in close proximity to each other. In short, there's a lot still to learn about our planet's magnetically charged, protective shell.

"The fact that we have very different shapes of bubbles this close together tells us that the dynamics of the atmosphere is more complex than we expected," Klenzing added.

Read the complete article at <https://tinyurl.com/ANS-196-IONOSPHERE>.

[ANS thanks nasa.gov for the above information.]

Want to fly the colors on your own grid expedition?

[cid:image004.png(a)01DAD546.1F6C9E10]

Get your AMSAT car flag and other neat stuff from our Zazzle store!
25% of the purchase price of each product goes towards
Keeping Amateur Radio in Space

https://www.zazzle.com/amsat_gear

Changes to AMSAT-NA TLE Distribution for July 12, 2024

Two Line Elements or TLEs, often referred to as Keplerian elements or keps in the amateur community, are the inputs to the SGP4 standard mathematical model of spacecraft orbits used by most amateur tracking programs. Weekly updates are completely adequate for most amateur satellites. TLE bulletin files are updated daily in the first hour of the UTC day. New bulletin files will be posted immediately after reliable elements become available for new amateur satellites. More information may be found at <https://www.amsat.org/keplerian-elements-resources/>.

This week there are no additions or deletions to the AMSAT TLE distribution.

[ANS thanks Joe Fitzgerald, KM1P, AMSAT Orbital Elements Manager, for the above information.]

ARISS NEWS

Amateurs and others around the world may listen in on contacts between amateurs operating in schools and allowing students to interact with astronauts and cosmonauts aboard the International Space Station. The downlink frequency on which to listen is 145.800 MHz worldwide.
[ARISS News]

Upcoming Contacts

Hokusetsu District Osaka Council Scout Association of Japan, Toyonaka, Japan, direct via JJ3YDM.
The ISS callsign is presently scheduled to be OR4ISS.
The scheduled crewmember is Mike Barrat, t KD5MIJ.
The ARISS mentor is Satoshi Yasuda, 7M3TJZ.
Contact is go for July 18, 2024 at 08:23:52 UTC.

Completed Contacts

Houjoudu Elementary School, Imizu, Japan, direct via JA9YQJ.
The ISS callsign was OR4ISS.
The crewmember was Mike Barratt, KD5MIJ.
The ARISS mentor was Satoshi Yasuda, 7M3TJZ.
Contact was successful on Thursday, July 11, 2024 at 10:48:03 UTC.

Youth On the Air 2024, Mount Saint Vincent University, Halifax, NS, Canada, Telebridge via ZS6JON.
The ISS callsign was NA1SS.
The crewmember was Jeanette Epps. KF5QNU.
The ARISS mentor was Brian Jackson, VE6JBj.
Contact was successful on Tuesday, July 9, 2024 at 15:06:38 UTC.

The crossband repeater continues to be active (145.990 MHz up {PL 67} & 437.800 MHz down). If any crewmember is so inclined, all they have to do is pick up the microphone, raise the volume up, and talk on the crossband repeater. So give a listen, you just never know.

The packet system is also active (145.825 MHz up & down).

As always, if there is an EVA, a docking, or an undocking; the ARISS radios are turned off as part of the safety protocol.

Note, all times are approximate. It is recommended that you do your own orbital prediction or start listening about 10 minutes before the listed time.

The latest information on the operation mode can be found at
<https://www.ariss.org/current-status-of-iss-stations.html>

The latest list of frequencies in use can be found at <https://www.ariss.org/contact-the-iss.html>

[ANS thanks Charlie Sufana, AJ9N, one of the ARISS operation team mentors for the above information.]

Upcoming Satellite Operations

No operation listed at this time.

A growing number of satellite rovers are currently engaged in sharing their grid square activations on <https://hams.at>. By visiting the website, you gain easy access to comprehensive information about the operators responsible for activating specific grid squares. Additionally, you have the ability to assess the match score between yourself and a particular rover for a given pass, while also being able to identify the upcoming satellite passes that are accessible from your location.

[ANS thanks Ian Parsons, K5ZM, AMSAT Rover Page Manager, and Alex Ners, K6VHF, for the above information.]

AMSAT Ambassador Events

AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events.

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July 13, 2024
Firecracker Hamfest
Salisbury, NC
N7GZT

July 20, 2024
"Moon Day" Frontiers of Flight Museum
Love Field in Dallas, Texas
AMSAT volunteers needed! Contact [tschuessler\(at\)amsat.org](mailto:tschuessler(at)amsat.org) for more information.

July 20, 2024
WCARS Hamfest 2024
Waynesville, NC
N4HF

August 3, 2024
2024 KARS / ARRL Idaho State Convention
Post Falls, ID
K7SYS

August 17-18, 2024
Huntsville Hamfest
Huntsville, AL
AMSAT Booth and Forum
N8DEU

August 23-25
2024 Northeast HamXposition and
ARRL New England Division Convention
Marlborough, MA
WD4ASW and W1EME

September 7, 2024
Greater Louisville Hamfest
Shepherdsville, KY
AMSAT Forum and Information Table
W4FCL

October 5, 2024

North Star Radio Convention
Hennepin Technical College (North Campus)
Brooklyn Park, MN.
AMSAT Forum and Information Table
KØJM and ADØHJ

October 25-27, 2004
AMSAT Space Symposium and Annual General Meeting
Double Tree Rocky Point Waterfront Hotel
Tampa Bay, FL

November 2-3, 2024
Stone Mountain Hamfest, ARRL State Convention
Stone Mountain, GA
K4RGK

[ANS thanks the Bo Lowrey, W4FCL, Director - AMSAT Ambassador Program for the above information.]

Satellite Shorts From All Over

* Congratulations are in order for Frank Hoonhout, KJ7DZ, for his impressive accomplishment in earning GridMaster Award #66! This esteemed recognition, initiated by Star Comm Group in 2014 and backed by Damon Runion, WA4HFN, and Rick Tillman, WA4NVM, has now been entrusted to AMSAT for the benefit of the entire amateur satellite community. The GridMaster Award celebrates radio amateurs worldwide who achieve two-way communication via amateur satellite with operators in all 488 Maidenhead grids across the contiguous United States of America. For more details on this distinguished award, visit the AMSAT website at <https://www.amsat.org/gridmaster/>. Frank, your achievement is truly commendable – well done! [ANS thanks Bruce Paige, KK5DO, AMSAT Director of Contests and Awards for the above information.]

* Tom Schuessler is still looking for a few volunteers from the DFW area to assist with the "Moon Day event at the Frontiers of Flight Museum on Saturday, July 20. This is a general public STEAM day with seminars, activities and exhibitors relating to space exploration and astronomy. He will have the CubeSat Simulator, Fox engineering model, explanation of satellite orbits and if available in the time frame, outdoor satellite passes worked. Volunteers get free admission and lunch and a break area. Tom needs to know by probably middle of next week. Drop Tom an email at [tschuessler \[at\] amsat \[dot\] org](mailto:tschuessler@amsat.org). [ANS thanks AMSAT for the above information.]

* Satellite enthusiast David Beumer, WØDHB, became a Silent Key on June 2 after a long battle with a form of Muscular Dystrophy. A ham since his days at Haverford Senior High School in Pennsylvania, from which he graduated in 1969, he was chief engineer of the high school radio station, WHHS. He furthered his education at Stevens Institute of Technology and graduated in 1973 with his degree in Electrical Engineering. Dave started his career in Boston and later moved to San Diego, Calif., where he met Patty. Married in 1980, they moved to the Bay Area in 1984. From there they moved on to Colorado in 1989 for Dave's job. Dave was employed by Markrevel, Calma, Daisy, Dazix, and VeryBest during his career. He was active on the linear birds and authored the software, FlexSatPC, which is used by many Flex Radio operators for satellite work. [ANS thanks the Beumer family for the above information.]

Join AMSAT today at <https://launch.amsat.org/>

In addition to regular membership, AMSAT offers membership to:

- * Societies (a recognized group, clubs or organization).
- * Primary and secondary school students are eligible for membership at one-half the standard yearly rate.
- * Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status.
- * Memberships are available for annual and lifetime terms.

Contact info [at] amsat [dot] org for additional membership information.

73 and remember to help Keep Amateur Radio in Space!

This week's ANS Editor, Frank Karnauskas, N1UW
f.karnauskas [at] amsat [dot] org